

## **INTRODUCTION**

The California Air Resources Board (ARB), part of the California Environmental Protection Agency, is the governmental agency delegated under State law with the authority and responsibility for collecting ambient air quality data as directed by the Clean Air Act 1977 and Clean Air Act Amendments 1990. ARB operates ambient monitoring stations throughout the State and is the designated Primary Quality Assurance Organization (PQAO)<sup>1</sup> for the entire State with the exception of ambient air monitoring stations operated by the Bay Area Air Quality Management District, the South Coast Air Quality Management District, and the San Diego Air Pollution Control District. As stated in the ARB Air Monitoring Quality Assurance Manual, Volume I, entitled "Quality Assurance Plan:

"The ARB has the primary responsibility to oversee quality assurance throughout the State, while local districts are responsible for their respective air monitoring programs."<sup>2</sup>

The ambient air monitoring program in the State of California encompasses many air quality assessment activities including collecting and analyzing data for the Federal criteria pollutants<sup>3</sup> as well as many other air pollutants of concern, collecting data from special studies as directed by the Board, determining which monitoring methods are used by the State and local air districts, (in compliance with Federal and State regulations), conducting annual performance audits of all monitoring equipment within its PQAO, implementation of a program to calibrate and certify measurement standards, and conducting training for its own staff, as well as local district staff, in the operation of air monitoring instruments.

During the months of June and July, 2007, EPA Region 9 conducted a Technical System Audit (TSA) of the ambient monitoring program operated by and/or overseen by the ARB. EPA staff interviewed management and staff in three branches of the ARB Monitoring and Laboratory Division (MLD) and one branch of the Planning and Technical Support Division (PTSD). The TSA covered the areas of Air Monitoring Network Management, Field Operations, Laboratory Operations, Data and Data Management, and Quality Assurance. In addition, the EPA staff reviewed these same areas with three local Districts: the San Joaquin Valley Air Pollution Control District, the Great Basin Unified Air Pollution Control District, and the Northern Sierra Air Quality Management District.

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<sup>1</sup> A Primary Quality Assurance Organization means a monitoring organization or other organization that is responsible for a set of stations that monitor the same pollutant and for which data quality assessments can be pooled. Each criteria pollutant sampler/monitor at a monitoring station in the SLAMS and SPM networks must be associated with one, and only one, primary quality assurance organization.

<sup>2</sup> ARB Air Monitoring Quality Assurance Manual, Volume I, Section 1.0.2.4, February 1, 1995.

<sup>3</sup> Criteria pollutants are those air pollutants for which the U.S. Environmental Protection Agency has established National Ambient Air Quality Standards and include carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter, and sulfur dioxide.

ARB personnel were very accommodating to the EPA audit team in making their and their staff's time available for many interviews, procedural reviews and monitoring site visits. Branch Chiefs interviewed were:

Ken Stroud -	Chief, Air Quality Surveillance Branch (AQSB), MLD
Jeff Cook -	Chief, Quality Management Branch (QMB), MLD
Michael Poore -	Chief, Northern Laboratory Branch, MLD
Karen Magliano -	Chief, Air Quality Data Branch (AQDB), PTSD

Many other individual section managers and staff were interviewed in Sacramento and in the field. We appreciate that ARB ensured that the EPA Audit team had access to all key personnel involved in the collection and quality assurance of ambient air quality data.

The EPA regional staff members conducting the TSA were Catherine Brown, Meredith Kurpius and Robert Pallarino of the Air Division's Technical Support Office and Matthew Plate, Steve Remaley and Roseanne Sakamoto of the Region 9 Quality Assurance Office.

The TSA began with a general meeting with ARB managers and staff on June 7, 2007 at the Monitoring and Laboratory Division office in Sacramento, CA. In addition to the EPA Audit Team, Sean Hogan and Eugenia McNaughton, respective Managers of EPA Region 9's Technical Support Office and Quality Assurance Office attended the opening meeting representing EPA Management.

This report is divided into X sections. The first section is an introduction that provides a brief description of the organization of ARB's air monitoring program, the EPA audit team, and the report organization. The next section is an executive summary that describes the purpose of the TSA and a summary of the most significant findings. The third section discusses our general findings on the ARB monitoring program as a whole. The remaining five sections address specific aspects of the air monitoring program: network management, field operations, laboratory operations, data management and quality assurance/quality control. Appendix A is a summary listing of the findings contained in this report. The findings and recommendations in this report are listed in priority order. Recommendations are provided to give some indication of the Region's expectations as to how findings can be addressed. If ARB has other approaches or alternatives to address the concerns identified, the Region will consider them, provided the corrective action adequately addresses the finding.